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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,304	09/22/2005	Christian Beckhaus	66489-070-7	2092

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DYKEMA GOSSETT PLLC
FRANKLIN SQUARE, THIRD FLOOR WEST
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

MIDKIFF, ANASTASIA

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/550,304	Applicant(s) BECKHAUS ET AL.	
	Examiner Anastasia Midkiff	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 22 Sept 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "7.2" has been used to designate both first electrical connection and second electrical connection in Figure 2a.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "53" (see Figures 5a-5c).

The drawings are objected to because the reference character "4" is partially erased in Figure 2b, leaving a mark that resembles "^". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 27, 31, 36, and 37-40 are objected to because of the following informalities:

With respect to Claim 27, Lines 1-3 recite, "said second image detector is disposed on the rear side of said first image detector, wherein there is insufficient antecedent basis for, "the rear side" with respect to the other detector and source.

With respect to Claim 31, Line 2 recites, "the region" wherein there is insufficient antecedent basis for this limitation in the claim. Examiner suggests replacing "the" with -a--.

With respect to Claim 35, Lines 6-7 recite, "the respective X-ray image" wherein there is insufficient antecedent basis for this limitation in the claim. Examiner suggests replacing "the" with --a--.

With respect to Claim 37, Line 3 recites, "said first sensor" wherein there is insufficient antecedent basis for this limitation.

With respect to Claim 39, the claim is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. If the camera is intended to be out of the optical path between the emitter and the image detector of the additional installation for teleradiographic images, this would remove the limitation of parent Claim 38, Lines 5-7, which states, "said camera is disposed in the region of the optical path between said x-ray emitter and said image detector of said installation," and, therefore, Claim 39 is not further limiting to Claim 38. Examiner suggests rewriting claim dependencies so that Claim 39 depends from Claim 37. For

Art Unit: 2882

the sake of examination, claims have been examined with this suggested claim dependency.

With respect to Claim 40, Lines 4 and 6 recite, "the X-ray fan beam" wherein there is insufficient antecedent basis for this limitation in the claim. Examiner suggests replacing "the" with --an--.

Claim 38 is objected to based on its dependency upon Claim 37.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-31, and 36-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to Claim 28, Line 2 recites, "image detector is adapted to retrofitting" which appears functional, rendering the claim indefinite insofar as it is not understood what is intended by the phrase "adapted for retrofitting."

With respect to Claim 29, Lines 1-3 recite, "said second image detector is part of said first image detector or said first image detector is part of said second image detector," wherein the phrase "is part of" renders the claim indefinite, as it is unclear what structural limitation is intended. The specification discusses a "virtual detector" (see Page 8 Lines 33-34, Page 9 Lines 1-5, and Figures 3a-3d), in which first and

Art Unit: 2882

second detectors *operate* as a single detector for the purpose of image generation, but there is no embodiment wherein the two detectors are structurally integral to each other.

With respect to Claim 31, Line 4 recites, "said camera can be adjusted," wherein the phrase "can be" renders the claim indefinite, insofar as it is unclear whether the limitations following "can be" are or are not part of the claimed invention.

With respect to Claim 36, Lines 3-4 recite, "and a support or on said support itself" wherein the term "or" renders the claim indefinite, as it is unclear if the possible configurations include adjustment means on said support itself and/or the connecting means on said support itself.

With respect to Claim 39, Lines 5-6 recite, "said camera can be moved," wherein the phrase "can be" renders the claim indefinite, insofar as it is unclear whether the limitations following "can be" are or are not part of the claimed invention.

Claims 30, 37-38, and 40 are rejected based on their dependency upon Claims 29, 36, and 39.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-28 and 32-34, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent to Pfeiffer (USP# 6,049,584).

With respect to Claims 22 and 28, as it is best understood, Pfeiffer teaches an x-ray sensitive camera (Abstract, Line 4) comprising:

- a first x-ray sensitive image detector (CCD, Figure 6) for the creation of a first tomographic image with a first depth of focus profile (Column 3 Lines 30-37, and Column 6 Lines 24-35);
- a second x-ray sensitive image detector (S'1, S'2, Figure 6) for the creation of a second tomographic image with a second depth of focus profile (Column 3 Lines 48-59, and Column 6 Lines 24-35);
- wherein adjustment means (Column 4, Lines 20-23 and 29-32) are provided for moving, as desired, said first image detector or said second image detector into proper alignment with an x-ray emitter for the creation of the respective x-ray image (Column 4, Lines 20-23 and 29-32);
- wherein said second image detector (S'1, S'2) is adapted for retrofitting (Figure 6).

With respect to Claim 23, Pfeiffer further teaches that the second depth of focus profile is distinctly smaller than the first depth of focus profile (Column 3 Lines 30-37 and 48-59, and Column 6 Lines 24-35).

With respect to Claim 24, Pfeiffer further teaches that the image-sensitive active surface ($2 \times B$) of said second image detector (S'1, S'2) is at least twice as large as said first image detector (B, CCD), in a first dimension (Figure 6).

With respect to Claim 25, Pfeiffer further teaches that the two image detectors are disposed in a common casing within said camera (Column 6, Lines 24-35).

With respect to Claims 26-27, as they are best understood, Pfeiffer further teaches said second image detector (S'1, S'2) is disposed alongside said first image detector (CCD), on the rear side of said first detector (Figure 6).

With respect to Claim 32, Pfeiffer further teaches that said camera has a radiolucent zone (F1, F2).

With respect to Claims 33-34, Pfeiffer further teaches that said radiolucent zone (F1, F2) is disposed alongside and between said first image detector and said second image detector (Figures 5 and 6, and Column 6 Lines 24-35).

Claims 22, 25, 26-28, 30-32, and 34-37 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent to Zeller et al. (USP# 6,055,292).

With respect to Claims 22 and 28, as it is best understood, Zeller et al. teach an x-ray sensitive camera (4) comprising:

- a first x-ray sensitive image detector (18) for the creation of a first tomographic image with a first depth of focus profile (Column 2, Lines 43-46);
- a second x-ray sensitive image detector (18') for the creation of a second tomographic image with a second depth of focus profile (Column 2, Lines 43-46);
- wherein adjustment means (9) are provided for moving, as desired, said first image detector (18) or said second image detector (18') into proper alignment with an x-ray emitter (3, Figure 2) for the creation of the

respective x-ray image (Column 2 Lines 43-46, and Column 5 Lines 23-41);

- wherein said second image detector is adapted for retrofitting (Figure 5).

With respect to Claim 25, Zeller et al. further teach that the two image detectors (18, 18') are disposed in a common casing (40) within said camera (Figures 1, 5, and 8).

With respect to Claims 26-27, as they are best understood, Zeller et al. further teach said second image detector (18') is disposed alongside said first image detector (18), on the rear side of said first detector (Figure 5).

With respect to Claim 30, Zeller et al. further teach that said adjustment means (9) and the two image detectors (18, 18') are disposed in a common casing (40) with said camera (Figures 1, 5, and 8).

With respect to Claim 31, as it is best understood, Zeller et al. further teach that said adjustment means (9) are provided on said casing (40) of said camera (4) and in a region of connecting means (8, 2, Figures 1 and 7) for the attachment of said camera (4) to a support (2), and said camera can be adjusted, as an entity, relatively to said connecting means (Column 3 Lines 7-11, and Figure 2).

With respect to Claims 32 and 34, Zeller et al. further teach that said camera (4) has a radiolucent zone, disposed alongside said first image detector and said second image detector, where x-rays enter said camera (Column 2, Lines 55-60).

With respect to Claim 35, Zeller et al. teach an x-ray system (Figures 1 and 8) having an image detector (18) built into an x-ray sensitive camera (4), comprising:

Art Unit: 2882

- an x-ray emitter (3) with a primary diaphragm (7);
- a second image detector (18') being provided inside said camera (Column 3, Line 22);
- wherein adjustment means (9) are provided for moving, as desired, said first (18) or second image detectors (18') into proper alignment with an x-ray emitter (3, Figure 2) for the creation of a respective x-ray image (Column 2, Lines 43-46).

With respect to Claim 36, as it is best understood, Zeller et al. further teach that said adjustment means (9) are provided on casing (40) of said camera (Figure 2).

With respect to Claim 37, as it is best understood, Zeller et al. further teach that the adjustment range of said camera is equal to at least one width of said first detector (Column 3, Lines 55-66).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


U.S. Patent to Nishikawa et al. (USP# 5,058,147) regarding positioning mechanisms for teleradiographic images, but without another image detector and the required alignment of same with respect to the beam path.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anastasia Midkiff whose telephone number is 571-272-5053. The examiner can normally be reached on M-F 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASM
8/11/06



Courtney Thomas
Courtney Thomas
Primary Examiner